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10/807,411

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Frank Muir

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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* FRANK MUIR

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Appeal 2008-2961  
Application 10/807,411  
Technology Center 1700

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Decided: August 13, 2008

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Before CHUNG K. PAK, TERRY J. OWENS, and  
ROMULO H. DELMENDO, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1 through 4, 7 through 11, 17, and 18, all of the pending claims in the above-identified application. We have jurisdiction pursuant to 35 U.S.C. § 6.

We AFFIRM-IN-PART.

*STATEMENT OF THE CASE*

The subject matter on appeal is directed to:

[A] magnification apparatus incorporated into a bottle cap and more specifically to a magnification apparatus and lid for a bottle molded concurrently into a single unit wherein the lens has a radius of curvature that varies in relation to the size or diameter of the bottle cap. [Spec. 1, ll. 5-9.]

Details of the appealed subject matter are recited in representative claim 1, 4, 11, 17, and 18 reproduced below<sup>1</sup>:

1. A method of making bottle caps, each having a built-in magnification feature, comprising the steps of:

selecting a radius of curvature for at least one of an upper or lower convex surface of a top portion of each bottle cap of a plurality of bottle caps wherein different radii are selected for different diameter bottle caps of said plurality of bottle caps; and

for each bottle cap to be made, pressing a single piece of plastic that is in the shape of a bottle, or will be formed into the shape of a bottle cap, having said top portion and an annular bottle engaging portion which includes either thread engaging members or a lid wall with an inwardly projecting hook region at its base for selectively affixing the bottle cap to a top of a bottle, wherein said at least one of said upper or lower convex surfaces of said top portion of each bottle cap of said plurality of bottle caps to be made has said radius of curvature selected in said selecting step so as to provide optical magnification of objects viewed through said top portion of each bottle cap of said plurality of bottle caps to be made has said radius of curvature selected in said selecting step so as to provide optical magnification of objects viewed through said top portion.

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<sup>1</sup> Appellants have presented substantive arguments for patentability of only claims 1, 4, 11, 17, and 18 (App. Br. 15-18). Therefore, for purposes of this appeal, we select claim 1, 4, 11, 17, and 18 and decide the propriety of the Examiner's grounds of rejection based on these representative claims alone consistent with 37 C.F.R. § 41.37(c)(1) (vii) (2005).

4. The method of claim 1 wherein said annular bottle engaged portion includes a lid wall with an inwardly projected hook region at its base.
11. The method of claim 1 wherein said single piece of plastic is translucent.
17. The method of claim 1 wherein said at least one of said upper or lower convex surfaces has a perimeter which extends to an edge of said annular bottle engaging portion.
18. The method of claim 1 wherein said step of pressing simultaneously forms the annular bottle engaging portion and said top portion having said at least one upper or lower convex surface.

As evidence of unpatentability of the appealed subject matter, the Examiner has proffered the following prior art references:

Owens	US 2,635,289	Apr. 21, 1953
Towns	US 2,669,369	Feb. 16, 1954
Harris	US 4,401,434	Aug. 30, 1983

The Examiner has rejected the claims on appeal as follows:

- 1) Claims 1-3, 7 through 11, and 18 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Owens;
- 2) Claim 4 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Owens and Towns; and
- 3) Claim 17 under 35 U.S.C. § 103(a) as unpatentable over the combined disclosures of Owens and Harris.

Appellants appeal from the Examiner's decision rejecting the claims on appeal under 35 U.S.C. § 103(a).

*RELEVANT FACTUAL FINDINGS (FF)*

1. Owens teaches an annular shape mounting means with a built-in magnification feature (e.g., concave-convex, plano-convex, double convex lens) and annular engaging members (e.g., threads) corresponding to the claimed bottle cap (Figs. 20 through 30, col. 11, ll. 5-50, and col. 18, l. 65 to col. 20, l. 45).

2. Owens teaches (col. 3, ll. 29-53) that:

All synthetic resins suitable for optical purposes are soft and easily scratched or deformed. Consequently I preferably form each lens with ... integral protective and preferably mounting and positioning extensions. I may form as one piece a lens, its mount, and a member by which the mount is operated...

Such formations which extend from the light transmitting or light reflecting body of the lens may be in the form of flanges, stops, shoulders, handles, threads, racks or other gear teeth, crank arms, slots, or the like, or a combination thereof. Thus, by one operation I am able to create both an optical element and the means for protecting, positioning, mounting and operating it. In addition to the economy and speed of production of this method it has similar and even greater advantages in assembly. The mounting and accurate positioning of an optical element within an instrument is a tedious and costly process which my method makes largely unnecessary.

3. Owens teaches (col. 4, ll.18-34) that:

[The] use [of] my novel punches and dies in a conventional punch press...As explained at length hereinafter I apply a punch to a moderately heated sheet of thermoplastic material and retain the punch under pressure and against the blank and the blank against the die until the blank has substantially cooled either naturally or preferably with the assistance of a fan which may be automatically or otherwise controlled. Thereupon I

raise the punch. While my invention may be applied to a suitable thermo-setting material I much prefer to employ it to individual thermoplastic blanks.

4. Owens teaches making “two substantially perfect optical surfaces, one for the punch and one for the die, since these two elements furnish not one lens but any number lenses which may be required...” and applying the lenses to various optical instruments including, inter alia, telescopes, and both binocular and monocular (col. 3, ll. 7-11 and 50-53 and col. 6, ll. 23-32).
5. Owens teaches pressing a moldable plastic material to desired sizes and shapes wanted in a finished element, with the lenses illustrated at Figures 20 through 30 having various radiuses (radii) of curvatures (col. 13, ll. 7-26, col. 18, l. 65 to col. col. 20, l. 65, and col. 32, ll. 39-55).
6. Owens exemplifies a unitary plastic structure having a light transmitting body (lens), an annular shoulder and a backwardly projecting protecting and mounting flange and teaches its light transmitting body being “not limited to the curvature of the light transmitting body since any form appropriate to any particular use may be employed, as for one example, a Fresnel condensing lens for use in a locomotive headlight” (col. 25, ll. 29-44).
7. Towns teaches a soda bottle cap having a bottle-engaging portion that includes a lid wall with an inwardly projecting hook region at its base to provide leak proof seal (Figures 1-6 and col. 3, ll. 3-38).
8. Harris teaches a medical and equipment kit having a receptacle for an antiseptic or similar fluid and a cap or mounting means having “a lens having convex surfaces and a perimeter which extends to an edge of the

annular bottle engaging portion” for removing sprinters (Ans. 5, and Harris, col. 1, ll. 62-68, col. 3, ll. 16-60, and Fig. 5).

### *PRINCIPLES OF LAW*

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). “[A]nalysis [of whether the subject matter of a claim would have been obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co., v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41 (2007).

### *ANALYSES AND ISSUES*

#### *CLAIMS 1, 7-11, and 18:*

The Examiner has correctly found that Owens teaches forming an annular shape mounting means with a built-in magnification feature and annular engaging members (e.g., threads) corresponding to the structure of the claimed bottle cap via pressing a single plastic sheet (FF 1-3). Appellants have not explained, much less demonstrated, how or why the claimed “bottle cap” is structurally distinguishable from the annular shape mounting device having a built-in magnification feature taught by Owens (Compare Ans. 3, with Br. 15-17). In fact, Appellants acknowledge (Tr. 3-4) that:

For today, I want to focus only on claim 1 because everything else is in the record in the case.

I did want to start out with kind of identifying what's not new. Okay? The examiner cited this reference to Harris, and you will see that Harris is a tube, and it's got a magnifying glass in the top. So the idea of having a magnifying glass and a cap on some device, that's not new. That's not what we are claiming.

This reference to Owens, Owens teaches using a compound press device for taking blanks of material, pressing them into a lens shape. He teaches making a variety of different type of lens devices, some for cameras, some for microscopes, a variety of other things. The idea of pressing plastic material into a lens shape, that's not new.

We even go so far as to say that pressing a material into a lens for a variety of different applications, that's also not new. That's what's in the Owens reference.

What we're focusing our attention on in claim 1 is for making bottle caps. It has a couple of steps. One step is selecting the radius of curvature step. Here it requires you to select the radius of curvature of the magnifying lens that you want.

You will see that in Figures 4 and 5 of the application. For example, you may have different-size pill bottles. Some are thin. Some are wide. Okay.

And what you're selecting is the top, the radius of curvature of the lens itself. For example, a larger bottle might have a lower radius of curvature, and a smaller bottle, a smaller diameter bottle might have a larger radius of curvature. [See also FF 1-6 and 8.]

Thus, the dispositive question is whether one of ordinary skill in the art would have been led to employ lenses having different radiuses (radii) of curvature for different optical instruments having different openings (e.g. telescopes, microscopes, and binoculars) to obtain desired magnification



within the meaning of 35 U.S.C. § 103(a). On this record, we answer this question in the affirmative.

As is apparent from Figures 20 through 30, Owens illustrates annular shape mounting devices comprising lenses having various radii of curvature and teaches making, *inter alia*, lenses having various shapes and sizes depending on the desired optical instruments involved (FF 4-6). It follows that one of ordinary skill in the art would have been led to employ appropriately sized and shaped mounting devices containing appropriate lenses, i.e., lenses having different radii of curvature, for given optical instruments (having different openings) for their optimum performances. This is especially true in this case since the radius of curvature of a lens is known to be a function of desired magnification.

As to separately argued claim 11, Owens teaches that the lens employed can be a light transmitting or light reflecting body and can be in “any form appropriate to any particular use..., as for one example, a Fresnel condensing lens for use in a locomotive headlight” ( FF 2 and 6). It follows that one of ordinary skill in the art would have been led to employ either a transparent or translucent lens depending on the use involved.

As to separately argued claim 18, Owen teaches simultaneously forming an annular bottle engaging portion and a top portion having at least one upper or lower convex surface (FF 2-4 and 6).

*CLAIM 4:*

The Examiner states (Ans. 5) that:

Owens teaches compression molding, but is silent to a bottle-engaging portion that includes a lid wall with an

inwardly projecting hook region at its base. However, this aspect is taught by Towns (Figs. 1-6).

The dispositive question is, therefore, whether one of ordinary skill in the art would have looked to the disclosure of Towns to improve the mounting device for optical instruments taught by Owens. On this record, we answer this question in the negative.

Although Towns teaches a vacuum sealing feature (a lid wall with an inwardly projecting hook region at its base) necessary for a soda bottle cap, it does not teach or suggest that such feature is desirable or useful in an optical mounting device used in optical instruments, such as telescopes, microscopes, binoculars, etc. On this record, the Examiner has not demonstrated that one of ordinary skill in the art would have looked to soda bottle cap features to improve mounting devices for optical instruments, such as those taught by Owens. Accordingly, we concur with Appellants that the Examiner has not established a prima facie case of obviousness regarding the subject matter recited in claim 4.

*CLAIM 17:*

Appellants do not dispute the Examiner's finding that Harris employs a lens having at least one of upper and lower convex surfaces extending to an edge of an annular medical and equipment bottle engaging portion, which is being used with a capping or mounting structure for the opening of the medicine and equipment bottle. (Compare Ans. 5 with Br. 18; see also FF 8). Appellants argue that the lens taught by Harris is not part of a single piece mounting or capping structure (Br. 18).

The dispositive question is, therefore, whether one of ordinary skill in

the art would have been led to employ the lens of Harris as part of a single piece mounting or capping structure within the meaning of 35 U.S.C. § 103

(a). On this record, we answer this question in the affirmative.

As indicated *supra*, Appellants acknowledge (Tr. 3-4) that:

I did want to start out with kind of identifying what's not new. Okay? The examiner cited this reference to Harris, and you will see that *Harris is a tube, and it's got a magnifying glass in the top. So the idea of having a magnifying glass and a cap on some device, that's not new.* That's not what we are claiming.

This reference to Owens, Owens teaches using a compound press device for taking blanks of material, pressing them into a lens shape. He teaches making a variety of different type of lens devices, some for cameras, some for microscopes, a variety of other things. The idea of pressing plastic material into a lens shape, that's not new.

We even go so far as to say that pressing a material into a lens for a variety of different applications, that's also not new. That's what's in the Owens reference. [Emphasis added.]

As also indicated *supra*, Owens teaches forming a unitary (single piece) mounting or capping structure having a magnification feature (lens) for optical instruments inclusive of the device of Harris.

Given the above teachings, we concur with the Examiner that one of ordinary skill in the art would have been led to a single piece capping or mounting structure having Harris' extended lens, motivated by a reasonable expectation of successfully obtaining the advantages taught by Owens.

*ORDER*

Appeal 2008-2961  
Application 10/807,411

In view of the foregoing, we affirm the Examiner's decision rejecting claims 1, 7 through 11, 17, and 18 under 35 U.S.C. § 103(a), but reverse the Examiner's decision rejecting claim 4 under 35 U.S.C. § 103(a).

*TIME PERIOD*

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED-IN-PART

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